



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

FISSIDENS HYALINUS.

WE found this moss growing on a steep bank in a moist, shaded ravine, along with *F. taxifolius* and *Hypnum hians*. It seems not to grow abundantly where it does grow, and this, added to its insignificant appearance, makes it a difficult object to find.

When we gathered these plants a short time ago it occurred to me that the conditions were not so peculiar that they might not be found in other places, and we began a hunt for other banks in moist, shaded ravines where the *taxifolius* grows. The *taxifolius* was our guide, and we have recently been successful in finding the moss in three other places.

We begin to think this little moss is more widely distributed than has been supposed. When in fruit it may be detected by a sharp eye held close to the ground, as the red peristome is prominent for so small an object. In hunting for this plant we have found it a good plan to take up with a case knife a slice of ground where smaller plants of *taxifolius* grow somewhat loosely and examine with a magnifying glass. If the *hyalinus* is in fruit it is easily detected by its red peristome, and its leaf is easily known when seen through a glass, since it is without mid-rib and the cells are so large that its appearance is similar to that of *Physcomitrium*. The *hyalinus* sometimes grows in clusters of 20 to 50 plants, but oftener separately.—*Extract from a letter of Alonzo Linn to Mrs. E. G. Britton, Nov. 1st, 1894.*

FISSIDENS GRANDIFRONS Brid.

THIS rare and interesting species is one of the largest of the genus; its stems measure from one to five inches in length, often repeatedly branched and rooting at the base of each branch, ultimately dividing into numerous smaller plants, and thus propagating the species. The leaves are long and narrow, closely placed, and the stem appears as a white wavy line between their clasping bases. They are composed of several layers of cells, which make them opaque and dense, for which reason Carl Müller coined the name *Pachyfissidens*, since raised to generic rank by Limpricht. They grow immersed in water saturated with lime, or in mud, and the plants are often encrusted and discolored to a dark green or brown. The species is dioicous, and the fruit has been found only once, in the Himalaya Mountains by Falconer, though this species occurs at several stations in

Europe, along the Rhine and its tributaries, in Switzerland and the Pyrenees. In America it is not uncommon, New York State leading with four or five stations in the western and central part, Niagara Falls being the best known. It has also been found in the mountains of Virginia, and in Michigan, Ohio, and Missouri. It occurs at several stations in Ontario, and in the Rocky Mountains from British Columbia to Idaho and Montana, and from Washington to California. Its nearest relative seems to be a Mexican species, *F. insignis* Sch. from Mt. Orizaba, of which the fruit is unknown.—*E. G. Britton.*

ON THE GENUS *FISSIDENS*, BY ERNEST STANLEY SALMON, ANN. OF BOT. 13: 103-130, *PLATES* 5-7, MARCH, 1899.

“THE structure of the leaf in the genus *Fissidens* is generally described as quite anomalous amongst mosses.”

After describing this structure, the author proceeds to explain the three principal theories which have been advanced to explain the morphology. The first one, accepted up to 1819, held that the leaf corresponds to that of other mosses, and that the sheathing part results from a split in the thickness of the leaf. The second was that of Robert Brown, published in 1819, which held that the double division of the leaf is its true blade, and the deviation from the normal structure is in the greater compression of the leaf and in the addition of a dorsal and terminal wing. “In support of this view it may be observed that in the lower leaves of the stem both the additional wings are greatly reduced in size, and in some cases entirely wanting, as they are universally in the perigonal leaves, which likewise have the more ordinary form, being only moderately concave and not even navicular.” This view was accepted by Bruch and Schimper, and has been followed by Limpricht and others. Lindberg advanced the third theory, and has been followed by Braithwaite, stating that the whole expansion of the leaf is the true leaf, with the exception of one of the wings of the sheathing part, which is considered a stipule.

In order to prove which of these theories is correct, Mr. Salmon has studied the structure of the vein of the leaves of 18 species of *Fissidens* and those of similar leaves in *Bryoxiphium*, *Sorapilla* and *Diplophyllum*, and compared them with leaves of *Polytrichum*, *Catharinea*, *Pottia*, *Barbula* and *Tortula*, such of them as have outgrowths or lamellæ on their leaves. He con-